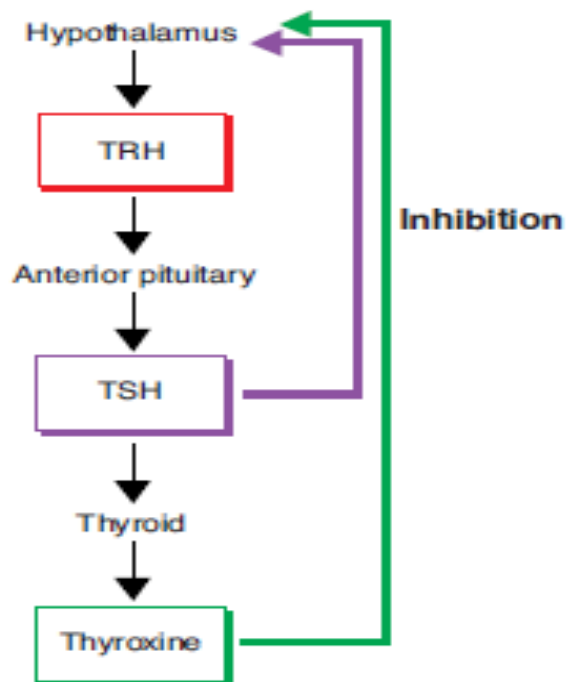


## Hormone Regulation

- the body is able to regulate hormone production through a process called negative feedback.
- once the hormone produces the desired effect, the secretions are turned off.
- messages are sent back to the pituitary gland and the gland stops producing the hormone.

### Lesson 3 Hormonal Control.notebook



- hypothalamus senses low levels of thyroxine (regulates metabolism)

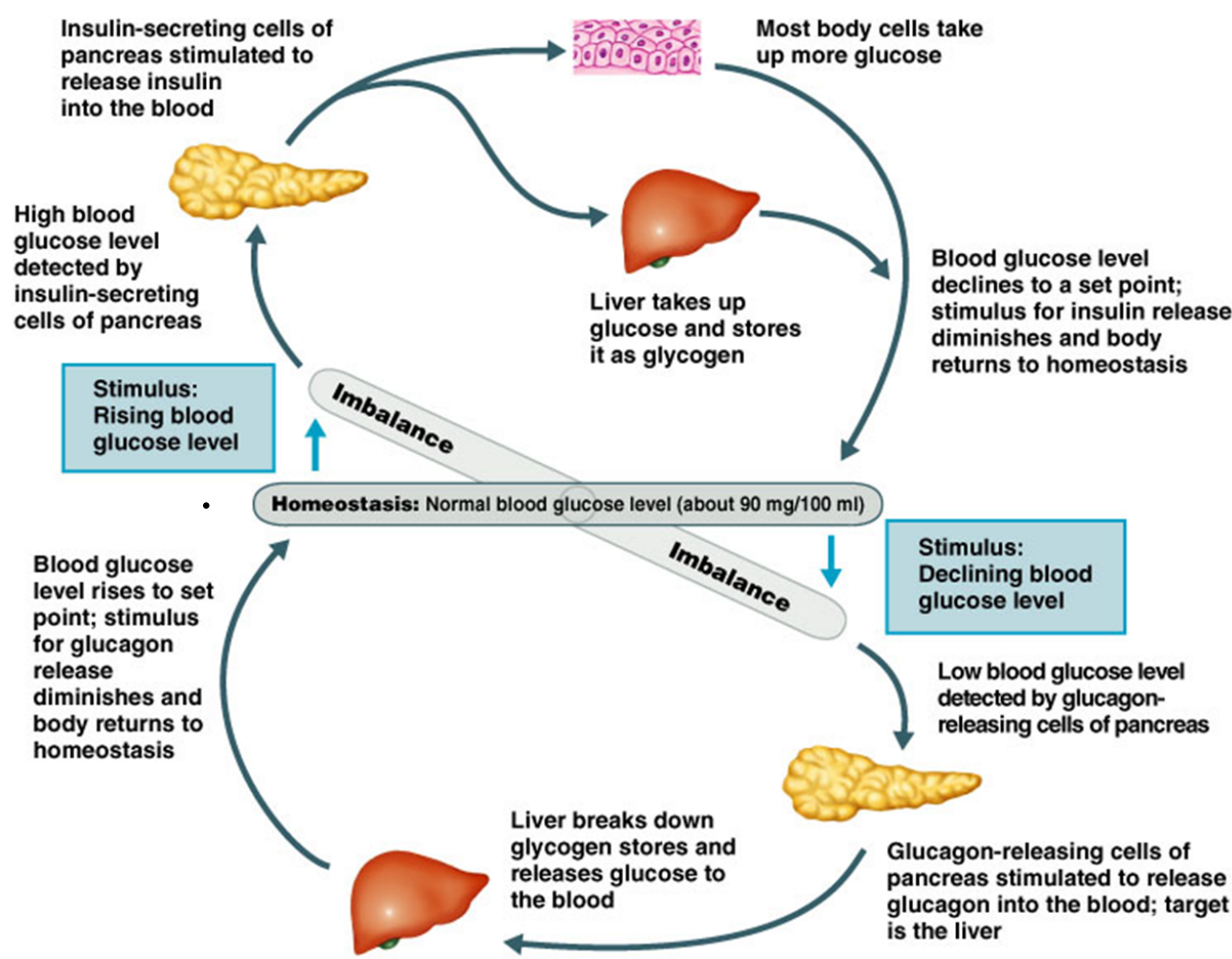
- message is sent to anterior pituitary to increase production of thyroxine. The hypothalamus sends thyrotropin releasing hormone to the pituitary gland

- TRH stimulates anterior pituitary to produce TSH (thyroid stimulating hormone)

- TSH is sent to thyroid and this increases production of thyroxine

- once levels of thyroxine increase a signal is sent back to the hypothalamus & production of TRH is inhibited.

Lesson 3 Hormonal Control.notebook



- high blood sugar levels
  - hypothalamus sends signal to pancreas
  - pancreas makes insulin
  - insulin promotes sugar usage by cells (glycogen)
  - excess sugar → stored by liver
  - low levels of sugar (detected by hypothalamus → pancreas)
  - pancreas produce glycagon
  - sent to liver to release glycogen
  - blood sugars increase
- 